

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number  
**WO 2005/006252 A1**

- (51) International Patent Classification<sup>7</sup>: **G06T 3/00**
- (21) International Application Number:  
PCT/EP2004/007098
- (22) International Filing Date: 30 June 2004 (30.06.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
0350279 1 July 2003 (01.07.2003) FR
- (71) Applicant (for all designated States except US): **THOMSON LICENSING SA** [FR/FR]; 46 Quai A. Le Gallo, F-92100 Boulogne Billancourt (FR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **OISEL, Lionel** [FR/FR]; 46 Quai Alphonse Le Gallo, F-92648 Boulogne Billancourt Cedex (FR). **KIJAK, Ewa** [FR/FR]; 46 Quai Alphonse Le Gallo, F-92648 Boulogne Billancourt Cedex (FR). **LE CLERC, Francois** [FR/FR]; 46 Quai Alphonse Le Gallo, F-92648 Boulogne Billancourt Cedex (FR).
- (74) Agent: **MICHELET, Alain**; Cabinet Harlé et Phélip, 7, rue de Madrid, F-75008 Paris (FR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

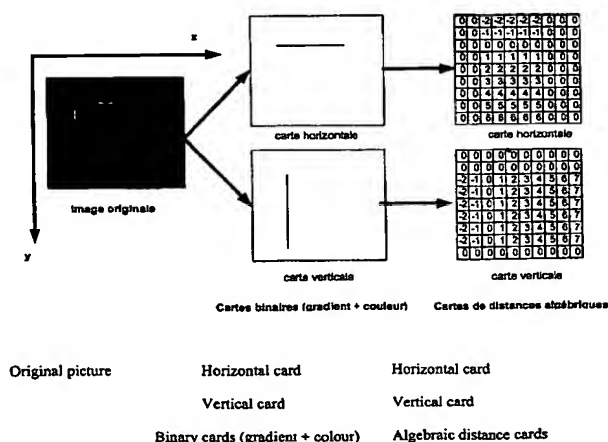
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: AUTOMATIC RESETTING METHOD INTENDED FOR A GEOMETRIC MODEL OF A SCENE OVER A PICTURE OF THE SCENE, IMPLEMENTING DEVICE AND PROGRAMMING MEDIUM



(57) Abstract: The invention concerns a device and an automatic resetting method using electronic means intended for a geometric model of a scene over a picture of the scene including fixed references, the electronic means comparing the picture with model having been adjusted in perspective by homography for superimposition of the references. According to the invention, the electronic device calculates a fine homography function  $H_f$  for resetting into three phases: a first preliminary phase of determination of an average resetting homography consisting in determining an average homography function  $H_m$  applicable to the model with average adjustment over a sample of pictures of the scene taken previously, a second, rough resetting phase consisting after application of the average homography function  $H_m$ , to the model in determining a rough homography function  $H_g$ , and a third, fine resetting phase consisting after application of the rough homography function  $H_g$  to the model in determining the fine homography function  $H_f$ .



---

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*